

A common task solved during a work with raster images is a object selection. Results obtained from this task are used in a number of applications - from analysis of the growth of human settlements to automatic medical diagnosis. This work describes in detail the object selection in raster images and focuses on active contours models.

This work also consider extending the graphic program GIMP, bringing a new plug-in for object selection in raster images. The solution is based on the original classic model of active contours, the extended model using a gradient vector field (GVF) and proposed improvements.

The work presents results obtained by this tool and brings recommendations for future development of active contours models.